PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

BCHydro

BRITISH
COLUMBIA

Wolverine Range Woodland Caribou Calf Survey, June 1994

M. D. Wood
June 1994

PWFWCP Report No. 34

105-00942/

The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave. 3rd Floor, Prince George B.C. V2L 3H9

Website: *www.bchydro.bc.ca/environment/initiatives/pwcp/*

This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

Citation: M. D. Wood. June 1994. Wolverine Range woodland caribou calf survey, June 1994. Peace/Williston Fish and Wildlife Compensation Program. Report No. 34. 3pp plus appendices.

Author(s): Mari D. Wood[1]
Address(es): [1] Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave., 3rd Floor Prince George, B.C. V2L 3H9

WOLVERINE RANGE WOODLAND CARIBOU CALF INVENTORY

JUNE 16, 1994

INTRODUCTION:

An inventory of woodland caribou with the objective of determining cow/calf ratios was attempted on June 16, 1994 on portions of the Wolverine Mountain Range west of the Williston Reservoir. The survey was conducted with a Bell 206 helicopter chartered by Northern Mountain Helicopters from Mackenzie, with pilot Rich Goddard.

SURVEY CONDITIONS:

The survey commenced at 10:00 am at the south end of the Wolverine Range, ending near Mt. Porter around 12:20 pm. to fuel up at Mesilinka. The survey recommenced at 12:45 pm at the north end of the Wolverines above the entrance to the Omineca Arm, and finished at the far north end of the range about one hour later. The weather was a mix of sun and clouds, with increasing clouds throughout the day. The temperature was about 10 degrees C., with low to moderate winds. Fresh snow had fallen on the range about two days prior to the survey: snow cover was about 60% which made sighting caribou on the patchy ground more difficult. Six days earlier on a radio-telemetry tracking flight, snow coverage had been estimated at only 20%. The approximately 30 cm of fresh snow did aid in locating tracks however. The entire range was not surveyed due to time and money limitations, poor weather that restricted visibility in some areas, the lack of caribou and of tracks encountered during the first portion of the survey, and the poor snow conditions which made sighting caribou more difficult.

METHODS:

The inventory method involved flying the alpine ridges and bowls of the Wolverine Range, using a helicopter and three-person crew. The navigator (Mari Wood, Wildlife Biologist, Peace/Williston Program), searched for, counted and classified animals, and recorded the flightline and locations of animals seen on 1:250,000 topographic maps. The two rear seat observers (Fraser Corbould, Wildlife Biologist, Peace/Williston Program, and Doug Heard, Regional Wildlife Biologist, B.C. Environment) also assisted with searching for and classifing animals. Fraser recorded all observations on the survey forms. Animals were classified as adult male, adult female, yearling male, yearling female, or calves. Caribou were classified using the vulval patch method. Each caribou was sexed from behind as they ran single file with their tails flagged. Female caribou exhibit a dark vulval patch, whereas males do not. Presence/absence of antlers on females was recorded, as was presence/absence of an udder. Females with no antlers, an udder and no calf were determined to have given birth but lost their calf, while females with antlers, no udder and no calf were classified as dry.

RESULTS:

Three mountain goats (nanny/kid and a yearling, groups 2 & 3 respectively) and 45 woodland caribou were observed on the survey (Table 1). In addition, one wolverine and its den site was sighted and recorded. Group size, classifications and map locations of animals are recorded in Appendix I. Composition of the caribou sighted included 16 cow/calf pairs (32 total), 5 females with udders, 1 dry female, 1 male, 2 yearling females, and 3 yearling males (Table 1). In summary then, 95% of all females gave birth, and of those females, 24% lost their calves within the first couple of weeks of life. The cow/calf ratio was 73 calves/100 cows. Two groups of caribou were located with the use of radio-tracking equipment: #515 (6 caribou), and #372 (4 caribou). Both collared females had calves. Female #515 was located around treeline, moving up into the alpine, and #372 was located in thick heavy timber on a north slope. Neither would have been observed without using radio-telemetry. Two other collared caribou (#464 and #433) were observed during the survey without the aid of telemetry equipment.

Radio-telemetry flights revealed only 11% (1/9) and 22% (2/9) of the caribou on June 2 and June 10 respectively alpine areas. The remainder were in subalpine or timbered habitats. This correlates well with the relatively low number of caribou observed on the Wolverine Range during this survey. It appears that caribou are not moving up into the alpine after calving as quickly as previously thought, but are remaining near calving sites for longer periods of time.

RECOMMENDATIONS:

1. Calf counts of Wolverine Range caribou should not be attempted. Results indicate that the majority of caribou are remaining in subalpine and forested habitats throughout the calving period and well into June, as confirmed by the low numbers of caribou seen on the survey, and by radio-telemetry data. By the time females move up into the alpine for the summer, udders will have absorbed preventing estimations of calving success and early calf mortality.

2. To get an indication of early calf mortality, a helicopter radio-location survey could be conducted around mid-June to determine if collared females were with calves, had lost their calves, or were dry.

Table 1. Classification of woodland caribou observed during Wolverine Range survey.

	FEMALES			MALE	YRL M	YRL F
GROUP #	w/calves	w/udders	dry			
1	2	1			1	
4	2					
5	2			1		1
6	2					
7				1		
8	2					
9	3	1	1			
10	1	2			1	
11	2	1				1
12					1	
TOTAL	(x 2) = 32	5	1	2	3	2

WOODLAND CARIBOU SURVEY

Location Wolverine River
Area (km2)
Date June 16/94
M.U. 7-25 / 7-29
Method Caribou Herd Survey
Observers [illegible]
Start Time 10-12:15 - 12:50
End Time

Weather Conditions Clear, sunny w/ cloud cover in mtns
Temperature (C) -10°C
Windspeed Calm to light, occ. moderate in pm
Snow Conditions: Hrs since snow 2 days since last snow
Snow Depth (cm) ~ 30cm
Snow Coverage (%) 50-60% on S facing slopes

Comments Poor conditions with snow cover for making counts, but there is not much caribou in the alpine.

Caribou Classification:

M	adult male	YRf	yearling female
F	adult female	YRm	yearling male
C	calf	YR	unclassified yearling
UA	unclassified adult	U	unclassified caribou

Wolverine Den Site (Waypoint) 55°39'96 - 124°14'92"

GROUP #	TOTAL IN GROUP	CARIBOU CLASSIFICATION	ELEV	COMMENTS
1	6	3♂, 2c, 1 yr ♂		[illegible]
2	(2 cows)	♀ + c		
3	(1 calf)	yr		
4	4	3♂, 2c (#464)		no radios
5 *	6	2♂, 2c, 1♂, 1 yr ♂, 1♀	(5154') calf	location [illegible]
6 *	4	2♂, 2c	(5124') calf	location [illegible]
7	1	1♂		
8	4	2♂, 2c		no radios
9	8	3♂, 3c, 1♀, calf, [illegible]	(833)	

WOODLAND CARIBOU SURVEY

Location Kakwa Range Date June 16/20

GROUP #	TOTAL IN GROUP	CARIBOU CLASSIFICATION	ELEV	COMMENTS
10	5	1♀ 1C, 1yrl♂, 2♀s	alpine	
11	6	2♀, 2C, 1yrl♀, 1♀	alpine	
12	1	1yrl♂		
		Summary		
Calves	cows	♀ adults ♀ yrlg	♂	yrl ♂ yrl ♀
16		5 1	2	3 2
TOTAL COUNT: 45				
% w/ calves		: 16/22 = 73%		
% lost calves		: 5/21 = 24%		
% that calved		: 21/22 = 95%		

WOLVERINE
RANGE
ROCKY
MOUNTAIN
TRENCH
FINLAY
RANGES
Germanson Landing
Germanson Landing
Manson Creek
Mount Pinker
Strawberry Creek
Blue Lake
Stuart
Lake